Jan. 9, 1962 D. A. McCASKILL 3,015,890

CORNER BEAD INSTALLATION DEVICE

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Fig.2

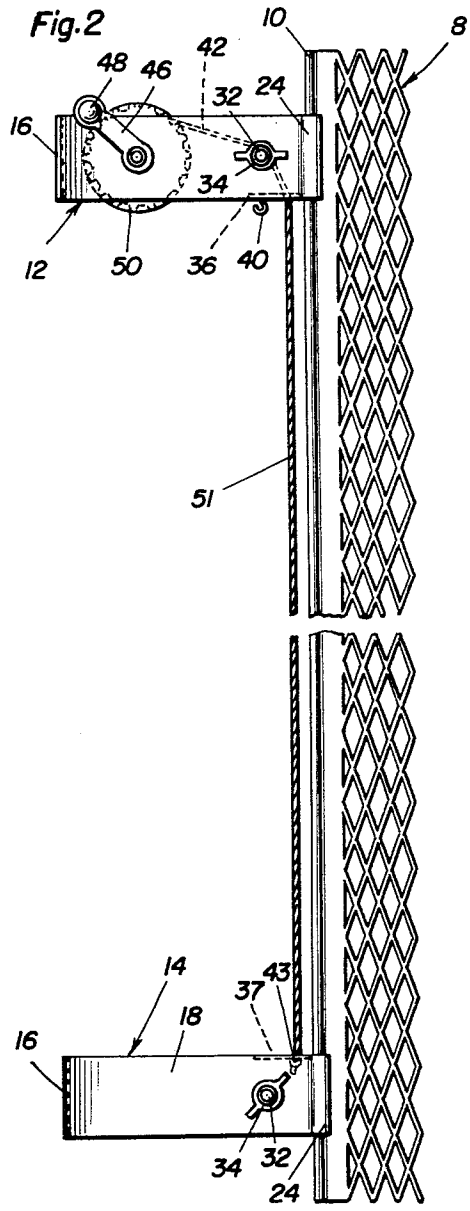

Fig.1

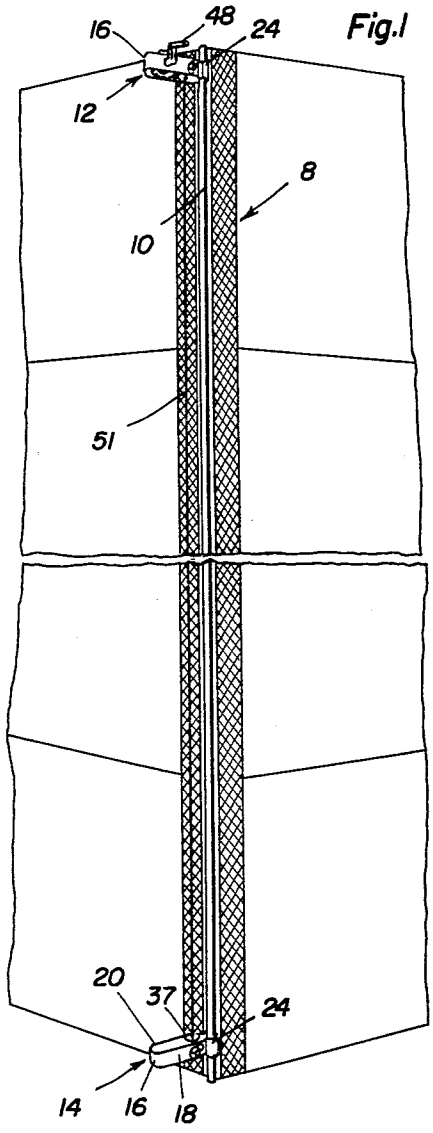

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Fig.3

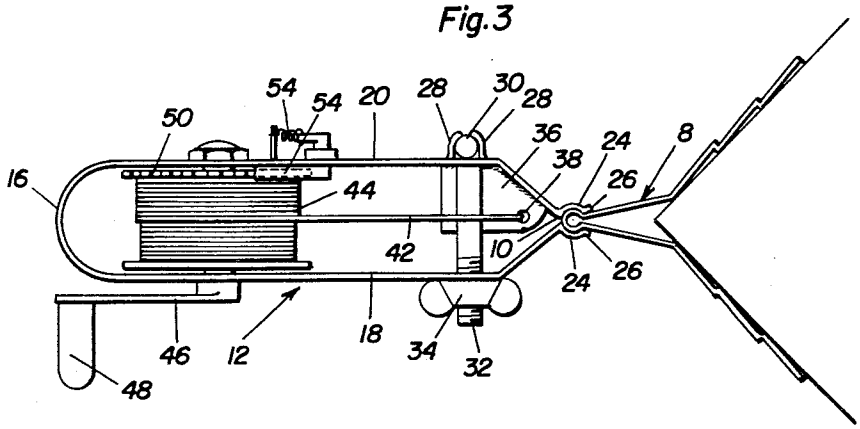


Fig.5

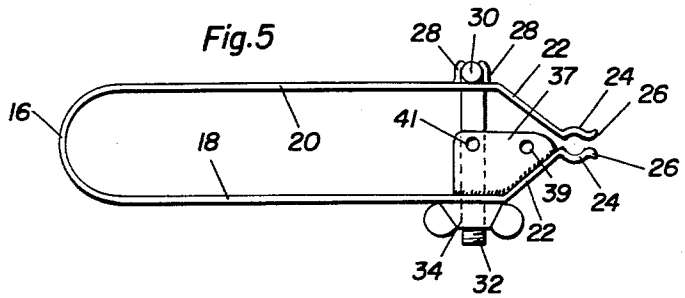
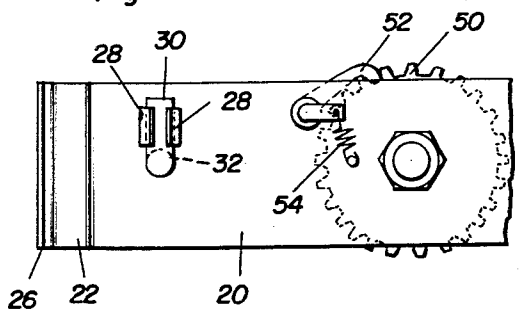


Fig.4



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CORNER BEAD INSTALLATION DEVICE

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4 Claims. (Cl. 33—85)

The present invention relates to certain new and useful improvements in a device which has been found to be efficient and advantageous in saving time and labor involved in the setting and installation of a metal or equivalent corner bead on plastered walls or ceilings and which is effectually and satisfactorily usable whether the corner bead is positioned either in a vertical or a horizontal plane.

One purpose of the invention is to enable the workman to install a corner bead in a manner that the resultant and finished corner is true in relation to expected verticality or, alternatively, the required horizontal plane.

In carrying out the invention, the equipment used is simple, practical, easy and expeditious to use and otherwise suitable in achieving the end results desired and which is also such that a single workman can set the corner bead as desired and also nail the same in the position established therefor.

Following procedures pursued in normal practices of placing and truing corner beads two workmen doing the required job will usually spend at least one-half hour in doing so. Using the invention herein disclosed enables a single mechanic or workman to set the corner bead, say in a ten foot corner, in approximately ten to fifteen minutes. This statement is based on actual usage of the invention making the latter quite advantageous considering that when the job is finished the corner bead has been properly trued and nailed in place.

Briefly summarized the invention in a preferred embodiment thereof is characterized by upper and lower releasably applied brackets. Both brackets have correspondingly constructed clamping jaws to embracingly engage the bead, the jaws being opened and closed by simple bolt and nut means. Both brackets have apertured ears embodied therein with the apertures serving to permit the passage therethrough of a taut line, for example a sagless plastic line. The upper bracket is provided with a reel having a turning crank or handle and provided with pawl and ratchet means so that the line can be drawn tight for accurate truing and plumbing results. By using individual clamps these clamps may be moved toward and from each other to occupy whatever distance therebetween is required and depending on the length of the corner bead up to one which would measure ten feet in length. The construction is also such as to accommodate a plumb bob where the distance between the clamps is ten feet or more.

Other objects, features and advantages will become more readily apparent from the following description and the accompanying drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the views:

FIG. 1 is a perspective view showing a fragmentary portion of a corner construction in a vertical wall and showing the corner bead and the invention and how the invention is applied for use;

FIG. 2 is a view on a larger scale showing only the corner bead and the invention applied thereto;

FIG. 3 is a top plan view on a still larger scale of the upper or top clamp or bracket;

FIG. 4 is a side elevation of the same; and

FIG. 5 is a plan view of the lower bracket or clamp.

In FIG. 2 the corner bead, which is conventional, is denoted by the numeral 8 this being of the usual angle construction with the regular bead 10 at the vertex thereof.

The upper clamp in FIG. 2, or bracket as it is alternatively called, is denoted by the numeral 12 and the lower clamp or bracket by the numeral 14. Both brackets in plan may be said to be U-shaped and made of an appropriate grade of metal, stainless steel for example. Since both brackets are basically the same, the common elements or parts thereof are designated by like numerals. That is to say the bight or bent portion of each bracket or clamp is denoted at 16 and the spaced parallel limbs or arms at 18 and 20. The free end portions of the arms are directed toward each other in converging relationship at 22 and the somewhat centralized terminal ends are bent, as at 24 and then again at 26 to provide a pair of radial extensions on the bead gripping and releasing jaws. The extreme end portions 26 are in divergent relationship to assist in piloting the clamp over the bead in an obvious manner. Inwardly or to the right of the end extensions 22 the limb 20 is provided with struckout tongues 28 embracing the upstanding or lateral end portion 30 of an L-shaped bolt. This bolt spans the space between the arms 18 and 20 and a screw threaded shank or end portion 32 projects through and beyond a bolt hole provided therefor in the arm 18 to accommodate a thumb nut 34.

The upper bracket or clamp is provided at the bottom thereof with a horizontal flange 36 having a line hole 38 provided therein. This same flange is used to support a depending simple hook 40 (see FIG. 2) which may be used wherever necessary or desired to support a plumb bob (not shown). The bolt 32 in this bracket is above the flange 36 so that an adjacent end portion 42 of the sagless plastic line may be drawn or trained over the bolt and then wound as at 44 on a simple reel which is journaled between the arms 18 and 20. The reel is provided on one side with a turning crank 46 having a hand grip 48. The other end of the reel within the confines of the arms 18 and 20 is provided with a toothed rim or wheel 50 providing a ratchet wheel to accommodate the pawl or dog 52 which is yieldably stressed into operative position by way of a suitably mounted coil spring 54.

The line guiding flange carried by the lower clamp and cooperating with the flange 36 is denoted by the numeral 37 and being complemental thereto is provided with a line hole 39 in alinement with the hole 38. This permits the plumbing or truing line 56 to be drawn down and either knotted and secured as shown in FIG. 2 or with the lower end passed through the hole 39 and then through the adjacent hole 41, using the two holes in an obvious manner to anchor the lower end of the line. For convenience the knotted lower end portion of the line is here denoted by the numeral 43. Thus the two clamps or brackets are much the same basically with the upper one carrying the winding and reeling drum or reel and with the lower one minus the reel but provided with a flange 37, the flange in this instance being at the top of the arms and therefore above the underlying bolt 32. By loosening and tightening the bolt the jaws 24 may be spread apart or clamped together whereby to facilitate attaching the lower clamp first for example and then the upper clamp or bracket secondly after having established the uppermost position of said upper bracket. As before stated instead of having some mechanical means such as a beam or the like joining the clamping devices together the clamping devices are individual or separate and consequently may be readily moved in a vertical or horizontal plane toward and from each other depending on the length of the bead which is being installed.

In operation, my invention is used to level or plumb

a corner bead. As shown in FIGURE 2, one of the clamps 12 is secured to one end of the bead and the other clamp 14 is secured to the other end of the bead. The line 51 is withdrawn from the reel 44 a sufficient distance whereupon the reel is locked by means of the pawl 52. Then the line is inserted over the smooth shank portion of the bolt 32 and threaded through the aperture 38 in flange 36. The free end of the line is then inserted through the aperture 39 in flange 37 of clamp 14 and tied thereto. If necessary, the line 51 may be further tightened by means of the crank 48 and reel 44. Once the line becomes tightened it is adjacent to and parallel with the projecting corner of the bead 10. If the bead 10 is to be leveled in a horizontal direction; an ordinary bricklayer's level is hooked onto the horizontal line 51, whereupon a single workman can adjust the bead 10 on a corner of the ceiling until it is level as indicated by the leveling device on line 51. After the bead is level it is tacked in place. If it is desired to plumb the bead 10 vertically before securing it to a corner wall, as shown in FIGURE 2, a bricklayer's level may be taped to the line 51, or any other small level may be secured to the line 51 by conventional means or manually held adjacent the line. The bead is then adjusted and plumbed until level and then tacked in place. A more convenient way of plumbing the bead 10 vertically, and one which does not require a level, is to secure a plumb bob line to the hook 40 in such a manner that the plumb bob is suspended a fraction of an inch over the lower flange 37 in clamp 14. The bead 10 is then adjusted on the corner wall until the plumb bob lies directly over the aperture 41 in the lower clamp. This indicates that the bead 10 extends in a true vertical direction. After the bead is aligned vertically, it may then be securely tacked in place. While adjusting the bead 10 in either its horizontal or vertical position, one end thereof may be tacked in position and the other end gradually moved until the entire bead is properly aligned as indicated by the level on line 51 or the plumb bob attached to hook 40. After the bead is properly leveled or plumbed, the other end thereof may then be tacked or nailed in position. The procedure described above, may be easily performed by only one man.

I am not unmindful that the art to which the invention relates is such that one may openly say that many and varied styles and forms of truing and plumbing devices and attachments have been evolved and produced some of these having been adopted, no doubt, for use. On the other hand the fact that, evidently, the majority of these devices have not met with widespread adoption and use has paved the way for the development of the instant invention for one-man use.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. For use as a component unit of a corner bead installing device, at least one bracket formed from sheet metal bent upon itself into general U-shaped form and having a bight portion at one end and spaced parallel arms, said arms having free ends and said free ends being directed toward each other in converging relationship but terminating in close spaced proximity and are then provided with outstanding extremities, the extremities being opposed to each other and bent and fashioned into a pair of bead clamping and releasing jaws, one of said arms having a flange thereon projecting toward the other arm and confined within the limits of the space existing between the converging portions of the arms and said flange having at least one line hole therein centered between the arms, an L-shaped bolt having its main shank portion passing through holes provided therefor in the respective arms and provided at one end with a thumb nut, the other end being the laterally directed end and being secured between retaining tongues struck-out from the adjacent portion of the arm and partially embracing said one end.

2. For use as a component unit of a corner bead installing device, at least one bracket formed from metal into a generally U-shaped form and having a bight portion at one end and spaced parallel arms, said arms having free ends and said free ends being directed toward each other in converging relationship but terminating in close spaced proximity and are then provided with outstanding extremities, the extremities being opposed to each other and formed into a pair of bead clamping and releasing jaws, one of said arms having a flange thereon projecting toward the other arm and said flange having at least one line opening therein centered between the arms, a bolt having a smooth shank passing through holes in said arms and over said flange, one end of said bolt having a head and the other end having a nut threaded thereon for drawing the free ends of said arms together, a reel mounted between said arms adjacent said bight portion, a line on said reel having an end portion extending over said smooth shank and through said line opening.

3. A device as defined in claim 2 wherein said pair of jaws comprise opposing arcuate members having a common center when in bead clamping position, each of the arcuate members having one end connected to one of said arms and a radial extension on its other end adapted to engage a flat surface on said bead so as to prevent pivoting of the device on the bead.

4. A device as defined in claim 2 wherein a manually rotatable crank is secured to the center of said reel for rotating it.

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